



## In the United States Patent and Trademark Office

Serial Number: 10/660894

Appn. Filed: 2003 Sept 12

Applicant(s): Thomas M. O'Brien & C. William Merten

Appn. Title: Device and Method for the Volumetric Measurement and Dispensing of Liquids

Examiner/GAU: / 3940

Mailed: 2003 Dec 5, Fri  
At: Dayton, OH

### Information Disclosure Statement

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Attached is a completed form PTO/SB/08(A&B) and copies of the pertinent parts of references cited thereon. No non-English-language references are cited. Following are comments on references provided.

Liston describes a device for the accurate aspiration and dispensing of liquids wherein syringe pumps are used to control the positioning of liquids. Driver liquids are used to displace gas from the system and manually operated syringes are used initially to purge gas with driver liquids and to replenish driver liquids. The current invention does not use driver liquids to eliminate gas from the system.

Faure describes a system for volumetric measurement of liquids in which an immiscible driver liquid is used to eliminate gas from liquid measurement volumes. In an additional embodiment, Faure describes a means to both aspirate liquid and remove gas from his system using a cylinder and piston. However, the cylinder must be inverted from the position shown to remove residual liquid from the cylinder and be operated in the position shown to remove gas from the system. The current invention does not rely upon an immiscible driver liquid and does not require repositioning of its syringe pump to purge liquid or gas from the system.

Edwards and Chomka describe a bottle top dispenser wherein a manually operated valve is used to bleed air and liquid from a manually operated pump comprising a piston and cylinder. Gas and liquid are indiscriminately returned to the liquid supply bottle until all gas is removed from the system. The current invention purges gas from the system without removing liquid.

BrandTech Scientific, Inc. sells pipettors and pipettor tips wherein gas volume is displaced by a piston conformal to the end of the pipette cylinder. This gas displacement technique cannot remove gas from tubing with bends which may be attached to a pump as in the case of the current invention.

Very respectfully,

Applicant(s):

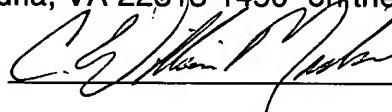


Enc.: PTO-1449 & References  
c/o: C. William Merten, Applicant Pro Se  
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Dayton, OH 45449  
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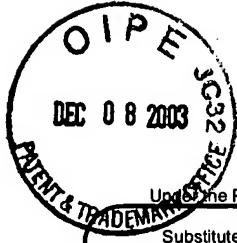
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**Substitute for form 1449/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

**(Use as many sheets as necessary)**

Sheet 1

of 2

**Complete if Known**

Application Number	10/660894
Filing Date	2000 Sept 12
First Named Inventor	Thomas M. O'Brien
Art Unit	03940
Examiner Name	
Attorney Docket Number	LL-002

**U. S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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PTO/SB/08B (08-03)

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<p><b>Substitute for form 1449/PTO</b></p>				<b>Application Number</b>	10/660894
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				<b>First Named Inventor</b>	Thomas M. O'Brien
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				<b>Examiner Name</b>	
<b>Sheet</b>	2	of	2	<b>Attorney Docket Number</b>	LL-002

## NON-PATENT LITERATURE DOCUMENTS

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